

Sorbus americana

Rosaceae family

American mountain ash, mountain ash, dogberry, small-fruited mountain ash, roundwood, missey-mossey, American Rowan tree

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Description: *Sorbus americana* is a slow-growing, short-lived, deciduous shrub to small tree. Pollination is by insects. Reproduction is by seeds and by sprouting. This plant sprouts from the stump following disturbance and damage.

Variation: *Sorbus americana* has no recognized subspecies, varieties, or forms. *Sorbus americana* hybridizes with *Pyrus melanocarpa* and with *Pyrus floribunda*. Several cultivars have been developed in the horticultural trade.

Size: Grows to 10-40 ft. (3-12.2 m) tall, 10-30 ft. (3-9 m) wide; its trunk 4-18 in (10-45.7 cm) in diameter.

Leaves: Leaves alternate, pinnately compound, petiolate; stipules deciduous. Leaf blade/lamina 6-17 in. (15.2-43 cm) long; leaflets 11-17, lance-shaped, long acuminate, averaging more than 3 times long as wide, 1.3-4 in. (3.3-10 cm) long, 0.4-1 in. (1-2.5 cm) wide, margins sharply serrate having mucronate teeth; upper surface dark green, glabrous to slightly pubescent; lower surface paler, glabrous to slightly pubescent.

Inflorescence: Inflorescence a terminal compound cyme, dense, much-branched, more or less flat-topped, showy, glabrous; clusters of small flowers, white, clusters 2.5-6 in. (6.4-15 cm) in diameter.

Flowers: Flowers perfect, 0.2-0.3 in. (0.4-0.8 cm) in diameter, with urn-shaped hypanthium; sepals 5; petals 5, white, spreading, with short claws; stamens numerous; styles 3, distinct, stigmas truncate.

Fruit: A pome, berry-like, in clusters. Fruit globose, orange-red to bright red when mature, 0.2-0.4 in. (0.4-1 cm) in diameter.

Bark: Smooth grayish-brown bark with numerous lenticels when young; developing cracks, splits, and scaly patches in age. Twigs moderate to stout, shiny gray to reddish brown.

Roots: Roots are fibrous.

Habitat: *Sorbus americana* prefers moist habitats, from the borders of swamps to rocky hillsides. It is common in openings or in woods, scattered on uplands along edges of woods, roadsides, and under semi-open stands. It grows in a stunted form on relatively dry soils not tolerating drought well, is not well adapted to warmer habitats, and it shade intolerant.

Species distribution in US states: CT, GA, IL, MA, ME, MI, MN, NC, NH, NJ, NY, PA, SC, TN, VA, VT, WI, WV

Species images:

Whole plant:

<http://www.duke.edu/~cwcook/trees/soam.html>

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-wp15013.JPG>

Bark:

younger tree:

<http://extension.usu.edu/forestry/UtahForests/TreeID/Assets/Images/abi-1.7.jpg>

older tree:

<http://www.cnr.vt.edu/DENDRO/dendrology/syllabus/factsheet.cfm?ID=405>

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-br15010.JPG>

<http://www.forestryimages.org/images/768x512/5349069.jpg>

Leaf:

http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&enlarge=0000+0000+0105+0926

<http://www.forestryimages.org/images/768x512/5350035.jpg>

leaflets:

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-lfleaflet15009.JPG>

Colored leaves:

<http://www.cnr.vt.edu/DENDRO/DENDROLOGY/fall/samericana.jpg>

Buds:

http://www.uwgb.edu/BIODIVERSITY/herbarium/trees/sorame_bud01.jpg

<http://www.cnr.vt.edu/DENDRO/dendrology/syllabus/factsheet.cfm?ID=405>

Inflorescence:

in bud:

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-fldevel49300.jpg>

in flower:

http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&enlarge=0000+0000+0105+0927

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-flinflor49339.jpg>

Flowers:

http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&enlarge=0000+0000+0105+0928

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-fl49344.jpg>

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-fl49332.jpg>

Fruit:

http://www.uwgb.edu/BIODIVERSITY/herbarium/trees/sorame_fruit01.jpg

http://calphotos.berkeley.edu/cgi/img_query?query_src=photos_index&enlarge=0000+0000+0105+0930

<http://www.cas.vanderbilt.edu/bioimages/biohires/s/hsoam3-frcloseup15008.JPG>

Seeds:

http://plants.usda.gov/java/largeImage?imageID=soam3_002_ahp.tif

Expected timing of growth stages:

Flowering: May-July, depending on location.

Bud break/Leaf out: *Need info.

Leaf/canopy development: *Need info.

Fruit ripening: August-October, depending on location.

Seed dispersion: Fruit is persistent, remaining on the plant all winter.

Phenophases to be monitored for NPN:

Leaf out

- *First leaf*
In at least 3 locations on the plant, the very first green tip of a young leaf has visibly moved out of the leaf bud.

Flowering

- *First flower*

In at least 3 locations on the plant, a flower has opened completely. Flowers are considered 'opened' when the reproductive parts are visible between unfolded or opened flower parts.

- *Full flower* [**Intensive only**]
The plant has reached its peak floral display. This occurs when half (50%) of the flowers on the whole plant have opened completely.
- *Last flower*
The last visible flower has opened completely and is still fresh.

Leaf elongation

Note: These measures can be difficult to estimate without a few seasons of practice.

- *25% leaf elongation* [**Intensive only**]
The majority of young leaves have unfolded completely and have expanded to one-quarter (25%) of their mature size. Leaf elongation may also be estimated by viewing the canopy as a whole. At 25% leaf elongation, the canopy appears to be approximately one-quarter (25%) full.
- *50% leaf elongation* [**Intensive only**]
The majority of young leaves have unfolded completely and have expanded to half (50%) of their mature size. Leaf elongation may also be estimated by viewing the canopy as a whole. At 50% leaf elongation, the canopy appears to be approximately half (50%) full.
- *75% leaf elongation*
The majority of young leaves have unfolded completely and have expanded to three-quarters (75%) of their mature size. Leaf elongation may also be estimated by viewing the canopy as a whole. At 75% leaf elongation, the canopy appears to be approximately three-quarters (75%) full.
- *Full leaf elongation* [**Intensive only**]
The majority of young leaves have unfolded completely and have expanded to 95-100% of their mature size. At full leaf elongation, the canopy appears to have reached its full density.

Fruit ripening

- *First fruit ripe*
In at least 3 locations on the plant, a fruit has become ripe. In *Sorbus americana*, a berry is considered ripe when it is orange-red to bright red in color or when it has been eaten by wildlife.

- *50% of fruit ripe* [**Intensive only**]
For the whole plant, half (50%) of the fruits are ripe.
- *All fruit ripe* [**Intensive only**]
For the whole plant, virtually all (95-100%) of the fruits are ripe.

Leaf color change

Note: If drought seems to be the cause of leaf color change for a plant, please make a comment about it for that plant.

- *First leaf colored* [**Intensive only**]
In at least 3 locations on the plant, the green leaves have begun to change to their late season colors.
- *25% of leaves colored* [**Intensive only**]
For the whole plant, one-quarter (25%) of the leaves (including any that have fallen to the ground) have changed to their late season colors.
- *50% of leaves colored*
For the whole plant, half (50%) of the leaves (including any that have fallen to the ground) have changed to their late season colors.
- *75% of leaves colored* [**Intensive only**]
For the whole plant, three-quarters (75%) of the leaves (including any that have fallen to the ground) have changed to their late season colors.
- *All leaves colored*
For the whole plant, virtually all (95-100%) of the leaves (including any that have fallen to the ground) have changed to their late season colors and there is virtually no green left in the leaves.

Leaf fall

Note: If drought seems to be the cause of leaf fall for a plant, please make a comment about it for that plant.

- *First leaf fallen* [**Intensive only**]
In at least 3 locations on the plant, a leaf easily falls off into your hand when touched or gently handled. First leaf fallen may also be indicated by the presence of at least 3

leaves on the ground below the plant (that are not apparently from another individual nearby).

- *25% of leaves fallen [Intensive only]*
For the whole plant, one-quarter (25%) of the leaves have fallen.
- *50% of leaves fallen*
For the whole plant, half (50%) of the leaves have fallen.
- *75% of leaves fallen [Intensive only]*
For the whole plant, three-quarters (75%) of the leaves have fallen.
- *All leaves fallen*
For the whole plant, virtually all (95-100%) of the leaves have fallen.

Did you know? *Sorbus americana* is favored by moose and white-tailed deer, eating foliate, twigs, and bark. Many other wildlife species also browse this species, along with birds and small mammals eating its berries. Humans use the berries to cook with meat and make into jellies. The plant is also used medicinally. Although this is not a 'true' ash, it has acquired its common name due to its compound leaves that are similar to true ashes (genus *Fraxinus*, family *Oleaceae*).

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Notes

The USDA PLANTS symbol for this plant is SOAM3.

The ITIS Taxonomic Serial No. for this species is 25319.

BBCH codes for phenophases used for this plant are available from the USA-NPN office upon request.

Proposed modifications, updates or corrections to this protocol are welcome; please direct correspondence to the USA-NPN National Coordinating Office.

Prior versions of this species protocol will be made available in a documents library on USA-NPN webpage.

Document history: V1.0(beta) 08/19/08

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